What Every Member of the Trade Community Should Know About:
Stranded Wire, Rope and Cable, of Iron or Steel

AN INFORMED COMPLIANCE PUBLICATION
MARCH 2010
NOTICE:

This publication is intended to provide guidance and information to the trade community. It reflects the position on or interpretation of the applicable laws or regulations by U.S. Customs and Border Protection (CBP) as of the date of publication, which is shown on the front cover. It does not in any way replace or supersede those laws or regulations. Only the latest official version of the laws or regulations is authoritative.

Publication History

First Published: May 2006
Reviewed With No Changes February 2008
Revised March 2010

PRINTING NOTE:

This publication was designed for electronic distribution via the CBP website (http://www.cbp.gov) and is being distributed in a variety of formats. It was originally set up in Microsoft Word 2003®. Pagination and margins in downloaded versions may vary depending upon which word processor or printer you use. If you wish to maintain the original settings, you may wish to download the .pdf version, which can then be printed using the freely available Adobe Acrobat Reader®.
PREFACE

On December 8, 1993, Title VI of the North American Free Trade Agreement Implementation Act (Pub. L. 103-182, 107 Stat. 2057), also known as the Customs Modernization or “Mod” Act, became effective. These provisions amended many sections of the Tariff Act of 1930 and related laws.

Two new concepts that emerge from the Mod Act are “informed compliance” and “shared responsibility,” which are premised on the idea that in order to maximize voluntary compliance with laws and regulations of U.S. Customs and Border Protection, the trade community needs to be clearly and completely informed of its legal obligations. Accordingly, the Mod Act imposes a greater obligation on CBP to provide the public with improved information concerning the trade community’s rights and responsibilities under customs regulations and related laws. In addition, both the trade and U.S. Customs and Border Protection share responsibility for carrying out these requirements. For example, under Section 484 of the Tariff Act, as amended (19 U.S.C. 1484), the importer of record is responsible for using reasonable care to enter, classify and determine the value of imported merchandise and to provide any other information necessary to enable U.S. Customs and Border Protection to properly assess duties, collect accurate statistics, and determine whether other applicable legal requirements, if any, have been met. CBP is then responsible for fixing the final classification and value of the merchandise. An importer of record’s failure to exercise reasonable care could delay release of the merchandise and, in some cases, could result in the imposition of penalties.

Regulations and Rulings (RR) of the Office of International Trade has been given a major role in meeting the informed compliance responsibilities of U.S. Customs and Border Protection. In order to provide information to the public, CBP has issued a series of informed compliance publications on new or revised requirements, regulations or procedures, and a variety of classification and valuation issues.

This publication, prepared by the National Commodity Specialist Division of Regulations and Rulings is entitled "Stranded Wire, Rope and Cable, of Iron or Steel." It provides guidance regarding the classification of these items. We sincerely hope that this material, together with seminars and increased access to rulings of U.S. Customs and Border Protection, will help the trade community to improve voluntary compliance with customs laws and to understand the relevant administrative processes.

The material in this publication is provided for general information purposes only. Because many complicated factors can be involved in customs issues, an importer may wish to obtain a ruling under Regulations of U.S. Customs and Border Protection, 19 C.F.R. Part 177, or to obtain advice from an expert who specializes in customs matters, for example, a licensed customs broker, attorney or consultant.

Comments and suggestions are welcomed and should be addressed to U.S. Customs and Border Protection, Office of International Trade, Executive Director, Regulations and Rulings, 799 9th Street N.W. 7th floor, Washington, D.C. 20229-1177.

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INTRODUCTION

This Informed Compliance Publication (ICP) proposes to explore the complexities of the tariff nomenclature containing stranded wire, rope and cable, of iron or steel. Technical terms will be defined, industry standards will be identified and the scope of the relevant heading and subheadings will be clarified. This is necessary to ensure both a uniform and consistent method of classification.

Specifically, this ICP deals solely with the merchandise of Heading 7312, which reads: Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated.

The heading includes such wire strand, ropes, cables, bands, whether or not they are cut to length, or fitted with hooks, spring hooks, swivels, rings, thimbles, clips, sockets, etc. (provided that they do not thereby assume the character of articles of other headings), or made up into single or multiple slings, strops, etc. These goods are used in a variety of applications such as hoisting (with cranes, winches, pulleys, lifts, etc.), mining, quarrying, shipping, hauling or towing, as hawser, transmission belting, as rigging or guying, or as strand for fencing or stone sawing.

Pursuant to Section XV, Note 2(a) of the HTSUS, articles of Heading 7312 are considered “parts of general use”. If, however, further processing of the articles, including the addition of special end terminations, dedicate them for use with articles of other headings, they assume the character of those articles and are excluded from Heading 7312.

SUBHEADINGS OF 7312

Although the aforementioned products are all included in one heading, it requires 22 different 10-digit subheadings under 7312.10, as well as subheading 7312.90.00 to provide for their tariff classification.

All of these subheadings can be categorized into three main subdivisions:

1) Stranded wire
2) Ropes, cables and cordage
3) Other

The following will provide a detailed explanation of the scope of these 23 10-digit subheading breakouts. Throughout this ICP, it will be necessary to define certain technical terms to better understand the provisionary language of Heading 7312.
1. STRANDED WIRE:

7312.10: Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated: Stranded wire, ropes and cables: Stranded wire

CLASSIFICATION OF STRANDED WIRE
Subheadings 7312.10.05 thru 7312.10.30

DEFINITIONS

As defined in Chapter 73, Legal Note 2, the word *wire* means hot or cold-formed products of any cross-sectional shape, of which no cross-sectional dimension exceeds 16 mm.

The particular design of a wire strand, wire rope or cable is referred to as its *construction* and is used to describe the number of wires contained in a given product and their relationships to each other. The *composition* of a product refers to the material used to manufacture it. Most wire strand, wire rope and cable are made from various grades of both stainless and carbon steels.

The term *stranded wire*, often referred to as *wire strand*, is defined as two or more wires wound concentrically in a helix which are usually wound around a center wire. ([http://www.the cableconnection.com/wireropeassemblies/spec1.htm](http://www.the cableconnection.com/wireropeassemblies/spec1.htm))

A *strand* is normally referred to as 1 by the total number of wires in the given strand. For example: 1x 3 denotes one group of 3 wires---not wound around core
1x 7 translates to one group of seven wires
1x 19 is one group of nineteen wires

![1X3 Strand](image1.png) ![1X7 Strand](image2.png) ![1X19 Strand](image3.png)

Chapter 72, Legal Note 1 states:

In this Chapter and, in the case of Notes (d) (e) and (f) throughout the Nomenclature, the following expressions have the meanings hereby assigned to them:
(d) **Steel** - Ferrous materials other than those of heading 7203 which (with the exception of certain types produced in the form of castings) are usually malleable and which contain by weight 2% or less of carbon. However, chromium steels may contain higher proportions of carbon.

(e) **Stainless steel** - Alloy steel containing, by weight 1.2 percent or less of carbon and 10.5 percent or more of chromium, with or without other elements.

(f) **Other alloy steel** - Steels not complying with the definition of stainless steel and containing by weight one or more of the following elements in the proportion shown:

-0.3% or more of aluminum  
-0.0008% or more of boron  
-0.3% or more of chromium  
-0.3% or more of cobalt  
-0.4% or more of copper  
-0.4% or more of lead  
-1.65% or more of manganese  
-0.08% or more of molybdenum  
-0.3% or more of nickel  
-0.06% or more of niobium  
-0.6% or more of silicon  
-0.05% or more of titanium  
-0.3% or more of tungsten (wolfram)  
-0.1% or more of vanadium  
-0.05% or more of zirconium  
-0.1% or more of other elements (except sulphur, phosphorous, carbon and nitrogen), taken separately

**STAINLESS STEEL**

Subheadings **7312.10.05** and **7312.10.10** provide for wire strands comprised of stainless steel. The stainless steel grades that are the most commonly used for products of this heading are AISI types 302/304, 303 and 316.

**7312.10.05** covers stainless steel strand that is fitted with fittings or made up into articles

The industry defines a **fitting**, in this context, as any accessory used as an attachment for strand or wire rope. It is Customs position that fittings, within the meaning of the involved provisions, are functional attachments for articles that have an identifiable use. Customs and Border Protection (CBP) Headquarters (HQ) amplified this position in HQ 072959 dated August 16, 1984, “a ‘fitting’ must make the strand fit or suitable for or adapt it to the purpose intended, and that the attachments which do not make the strand ready for final use do not “fit’ the strand in a tariff sense.”
Some examples of fittings, used with products of this heading, would include hooks, swivels, thimbles, clips, rings and sockets.

Fittings are functional attachments for articles that have an identifiable use. They are not temporary attachments for the purpose of facilitating the further processing of strand, rope, cable or cordage. In HQ 072959, dated April 23, 1984, it was found that that 7-wire pre-stressed strand with chucks attached to each end is classified as not fitted with fittings. A chuck is a cylinder with a tapered center hole that is manually threaded on to the end of the strand and is secured by two wedges that are hydraulically driven between the strand and the chuck. The chuck attached to the strand is said to facilitate the handling of the strand during further processing, such as coating the strand. However, it does not make the strand suitable for the purpose intended. At the time of importation, the strand is a material that has not been equipped or made suitable with any accessory parts that dedicate the wire strand to a particular use. Therefore, the wire strand in this case is not “fitted” for purposes of subheading 7312.10.05.

7312.10.10 encompasses all other types of stainless steel wire strand:
7312.10.1030 provides for Tire Cord. Tire cord is used as reinforcement in steel belted radial tires. It is comprised of multiple filaments of wire twisted together and is available in different sizes and construction. This product is manufactured in both stainless and carbon steel and is usually brass plated.

![Tire Cord](image)

7312.10.1050 covers other stranded wire having a lay or twist of not more than one revolution for a length equal to the strand diameter multiplied by 8.5. The **lay** of the strand is the direction in which the helix of the wires orbits the core. It is the axial distance required to make a 360-degree revolution of any element in a strand or cord. In simplest terms, subheading 7312.10.1050 translates to the strand having only 1 twist at a length that equals 8.5 times its diameter.

**THE LAY**

For example, a 3mm strand falling into this particular subheading would make only one complete turn at a distance measuring 25.5 mm (8.5 X strand diameter).

7312.10.1070 provides for stainless steel stranded wire that is not fitted with fittings or made up into articles, is not tire cord and has more than 1 revolution per the designated length described in the preceding subheading.

**OTHER THAN STAINLESS STEEL**

Subheadings 7312.10.20 and 7312.10.30 provide for stranded wire, other than stainless steel:
7312.10.20 covers that stranded wire which is fitted with fittings or made up into articles. See previous discussion on fittings in subheading 7312.10.05

7312.10.30 covers all other wire strand not made of stainless steel:

7312.10.3005 specifically provides for tire cord. See subheading 7312.10.1030 for details.

7312.10.3010 and 7312.10.3012 include stranded wire for prestressing concrete. Prestressed or PC strand is embedded into concrete to provide additional strength. Made of high carbon steel, this product may or may not be galvanized. PC strand is usually of 7-wire configuration meaning there is one central wire around which six wires are wrapped, but is also produced in a 3-wire construction. In this instance, the three wires are spun together. Prestressed strand is used in parking garages, utility poles, girders and pilings for bridges, sea walls, and homes by the water.

7312.10.3010 provides for that prestressed strand which is covered with textile or other nonmetallic material. This would include PC strand that is greased with a plastic sheath coating.

7312.10.3012 covers prestressed strand that is coated/covered with a metallic substance such as zinc or not coated at all.

ANTIDUMPING AND COUNTERVAILING DUTIES

There are various antidumping and countervailing duty cases that presently cover Prestressed Concrete Steel Wire Strand (PC Strand). A list of current antidumping and countervailing duty cases can be found at the International Trade Commission website at www.usitc.gov. The link to “Antidumping and Countervailing duty orders” under “Investigations” provides a search mechanism for current orders by country, date and product group. In addition, AD/CVD deposit and liquidation messages are available using the AD/CVD search tool at the U.S. Customs and Border Protection website at www.cbp.gov. Furthermore, information can be obtained by contacting the office of Field Operations at your local port of entry.

7312.10.30.20 provides for other than stainless steel wire strand that is not fitted with fittings or made up into articles, is not tire cord, not for prestressing concrete and has only one revolution per the designated length as described in subheading 7312.10.1050.

7312.10.30.45, 65, 70, 74 and 80 are the subheadings for that steel wire strand other than stainless steel which is not fitted with fittings or made up into articles, is not tire cord, not for prestressing concrete, and has more than one revolution per the designated length as described in subheading 7312.10.1050
7312.10.3045 provides for brass plated steel wire strand meeting the above conditions. **Brass** is an alloy having copper and zinc as its essential components.

**Galvanized** means coated with zinc to protect against corrosion. There are three subheadings that galvanized steel strand may fall into:

7312.10.30.65 provides specifically for ACSR core strand. While **ACSR** stands for Aluminum Conductor Steel Reinforcing, *only the steel core portion of this cable is classified here.*

ACSR describes aluminum or copper/aluminum combination wire strands wrapped around a steel strand.

ACSR type conducting material is widely used for overhead power lines and overhead (opposed to underground) distribution as messenger cable for utility application.

The following ASTM SPECIFICATIONS are indicators of ACSR Core Strand:

**B500**: Standard Specification for Metallic Coated Stranded Steel Core for Aluminum Conductors, Steel Reinforced (ACSR)

**B232**: Specification for Concentric-Lay Stranded Aluminum Conductors, Coated – Steel Reinforced (ACSR)

**B341**: Specification for Aluminum-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR/AZ)

**B498**: Specification for Zinc-Coated (Galvanized) Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR)

**B802**: Specification for Zinc 5% Aluminum- Mischmetal Alloy-Coated Steel Core Wire for Aluminum Conductors, Steel Reinforced (ACSR)

7312.10.3070 provides for galvanized strand, other than ACSR core strand, that is covered with textile or nonmetallic material.
7312.10.3074 is the provision for other galvanized strand that is not ACSR core strand and not covered with textile or other nonmetallic material.

7312.10.3080, the final wire strand subheading, provides for those products which are not stainless steel, not fitted with fittings or made up into articles, not tire cord, not for pre-stressing concrete, not brass plated or galvanized yet having a lay or twist more than one revolution per designated length.

STRAND VS ROPE

2. ROPES, CABLES and CORDAGE

7312.10: Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated: Stranded wire, ropes and cables: Ropes, cables and cordage other than stranded wire:

CLASSIFICATION OF ROPES, CABLES AND CORDAGE
Subheadings 7312.10.50 thru 7312.10.9090

In the industry, wire rope and cable are synonymous terms, while the use of the word cordage has become obsolete.

Wire rope is identified by its construction, or the number of strands per rope, and the number of wires in each strand. It is composed of wires, strands and a core.
For example: The construction 6x25 denotes a six-strand rope with each strand having 25 wires.

A predetermined number of finished wires are helically laid together in a uniform geometric pattern to form a strand. The required number of fabricated strands is laid symmetrically with a definite length of lay around a core, forming a finished wire rope. A core is the center member of the cable or wire rope and is considered the foundation. A core consists either of a strand or an independent wire rope. It is made up of materials that will provide proper support for the strands under normal bending and loading condition. Core materials may include natural fibers (such as hemp, sisal, cotton or jute), man-made fibers (such as rayon, nylon or polypropylene) or steel.

WIRE ROPE DIAGRAMS

STAINLESS STEEL

Subheadings 7312.10.50 and 7312.10.60 include those wire ropes, cables and cordage comprised of stainless steel.

7312.10.50 provides for stainless steel ropes, cables and cordage that are fitted with fittings or made up into articles. What does or does not constitute a “fitting” for tariff purposes is the same for both the rope, cable and cordage subheadings as it is in the previously examined strand provisions. See subheading 7312.10.05 for further explanation.
7312.10.6030 covers stainless steel ropes, cables and cordage not fitted with fittings nor made up into articles and not exceeding 9.5 mm (.37402") in diameter.

Diameter is the distance measured across the center of a circle circumscribing the wires of a strand or the strands of the wire rope. Rope diameters are determined by measuring the circle that just touches the extreme outer limits of the strand.

MEASURING THE DIAMETER

7312.10.6060 provides for those products described in the preceding subheading when the diameter exceeds 9.5 mm (.37402")

OTHER THAN STAINLESS STEEL

Subheadings 7312.10.70, 80 and 90 include those wire ropes, cables and cordage that are not made of stainless steel.

7312.10.70 provides for ropes, cables and cordage that are fitted with fittings or made up into articles. An example of a product that has been made up into an article would be a sling. Slings are wire ropes made into forms with or without fittings for handling loads and so made as to permit the attachment of the operating rope. See HQ 555892 dated October 10, 1991. Also, NY 86133 dated September 23, 2002.

SLINGS

Subheadings 7312.10.80 and 7312.10.90 provide for those ropes cables and cordage that are not fitted with fittings and not made up into articles.
An example of wire rope found to be classifiable in these subheadings was the subject of HQ ruling 958986 of June 28, 1996. Wherein wire rope with Becket end preparations attached to either end did not render the rope "fitted with fittings or made up into articles". The ruling quoted T.D. 88-78 which concluded that Becket attachments are facilitating in nature, and do not enable the wire rope to which they are attached to transmit motion or perform some other specific function. This kind of reasoning is what determines whether rope, cable, or for that matter, strand are “fitted” or "not fitted" for tariff purposes.

Used in conjunction with wire rope in hoisting, dragging or heavy-duty applications, Becket loops or attachments are merely a means of handling the rope. They are typically cut off before full load connections are made.

**WIRE ROPE WITHOUT FITTINGS**

These end preparations are examples of ropes that are **NOT** fitted with fittings

7312.10.80 includes only ropes cables and cordage made of brass-plated wire.

7312.10.90 covers those ropes, cables and cordage, which are not produced from brass plated wire but are imported in a galvanized or non-galvanized condition.

7312.10.9030 and 7312.10.9060 provide for galvanized ropes, cables and cordage distinguished only by their diameter measurement.

7312.10.9090 includes ropes, cables and cordage not of stainless steel, not fitted with fittings nor made up into articles, not of brass plated wire and not galvanized.

3. OTHER

7312.90: Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated: OTHER
CLASSIFICATION OF OTHER
Subheading 7312.90.0000

Whereas 7312.10 covers that part of the heading dealing with stranded wire, ropes, cable and cordage, and most items of this nature tend to be classified there, 7312.90.0000 is generally a quiet provision. Regarding this subheading there is nothing mentioned in the Harmonized Commodity Description and Coding System Explanatory Notes, other tariff nomenclature or CBP rulings that gives any further indication of the scope of this provision. While ropes and cables are generally round in cross section, heading 7312 also includes bands usually of rectangular (including square) cross-section, formed by plaiting single or stranded wire. Plaited bands are endless, much like a rubber band or conveyor belt, and are braided. They are classified in subheading 7312.90.0000.
ADDITIONAL INFORMATION

The Internet

The home page of U.S. Customs and Border Protection on the Internet’s World Wide Web, provides the trade community with current, relevant information regarding CBP operations and items of special interest. The site posts information -- which includes proposed regulations, news releases, publications and notices, etc. -- that can be searched, read on-line, printed or downloaded to your personal computer. The web site was established as a trade-friendly mechanism to assist the importing and exporting community. The web site also links to the home pages of many other agencies whose importing or exporting regulations that U.S. Customs and Border Protection helps to enforce. The web site also contains a wealth of information of interest to a broader public than the trade community. For instance, the “Know Before You Go” publication and traveler awareness campaign is designed to help educate international travelers.

The web address of U.S. Customs and Border Protection is http://www.cbp.gov

Customs Regulations

The current edition of Customs and Border Protection Regulations of the United States is a loose-leaf, subscription publication available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; telephone (202) 512-1800. A bound edition of Title 19, Code of Federal Regulations is also available for sale from the same address. All proposed and final regulations are published in the Federal Register, which is published daily by the Office of the Federal Register, National Archives and Records Administration, and distributed by the Superintendent of Documents. Information about on-line access to the Federal Register may be obtained by calling (202) 512-1530 between 7 a.m. and 5 p.m. Eastern time. These notices are also published in the weekly Customs Bulletin described below.

Customs Bulletin

The Customs Bulletin and Decisions (“Customs Bulletin”) is a weekly publication that contains decisions, rulings, regulatory proposals, notices and other information of interest to the trade community. It also contains decisions issued by the U.S. Court of International Trade, as well as customs-related decisions of the U.S. Court of Appeals for the Federal Circuit. Each year, the Government Printing Office publishes bound volumes of the Customs Bulletin. Subscriptions may be purchased from the Superintendent of Documents at the address and phone number listed above.
Importing into the United States

This publication provides an overview of the importing process and contains general information about import requirements. The current edition of Importing Into the United States contains much new and revised material brought about pursuant to the Customs Modernization Act ("Mod Act"). The Mod Act has fundamentally altered the relationship between importers and U.S. Customs and Border Protection by shifting to the importer the legal responsibility for declaring the value, classification, and rate of duty applicable to entered merchandise.

The current edition contains a section entitled "Informed Compliance." A key component of informed compliance is the shared responsibility between U.S. Customs and Border Protection and the import community, wherein CBP communicates its requirements to the importer, and the importer, in turn, uses reasonable care to assure that CBP is provided accurate and timely data pertaining to his or her importation.

Single copies may be obtained from local offices of U.S. Customs and Border Protection, or from the Office of Public Affairs, U.S. Customs and Border Protection, 1300 Pennsylvania Avenue NW, Washington, DC 20229. An on-line version is available at the CBP web site. Importing into the United States is also available for sale, in single copies or bulk orders, from the Superintendent of Documents by calling (202) 512-1800, or by mail from the Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7054.

Informed Compliance Publications

U.S. Customs and Border Protection has prepared a number of Informed Compliance publications in the “What Every Member of the Trade Community Should Know About:…” series. Check the Internet web site http://www.cbp.gov for current publications.
Value Publications

*Customs Valuation under the Trade Agreements Act of 1979* is a 96-page book containing a detailed narrative description of the customs valuation system, the customs valuation title of the Trade Agreements Act (§402 of the Tariff Act of 1930, as amended by the Trade Agreements Act of 1979 (19 U.S.C. §1401a)), the Statement of Administrative Action which was sent to the U.S. Congress in conjunction with the TAA, regulations (19 C.F.R. §§152.000-152.108) implementing the valuation system (a few sections of the regulations have been amended subsequent to the publication of the book) and questions and answers concerning the valuation system.

*Customs Valuation Encyclopedia* (with updates) is comprised of relevant statutory provisions, CBP Regulations implementing the statute, portions of the Customs Valuation Code, judicial precedent, and administrative rulings involving application of valuation law. A copy may be purchased for a nominal charge from the Superintendent of Documents, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7054. This publication is also available on the Internet web site of U.S. Customs and Border Protection.

The information provided in this publication is for general information purposes only. Recognizing that many complicated factors may be involved in customs issues, an importer may wish to obtain a ruling under CBP Regulations, 19 C.F.R. Part 177, or obtain advice from an expert (such as a licensed Customs Broker, attorney or consultant) who specializes in customs matters. Reliance solely on the general information in this pamphlet may not be considered reasonable care.

Additional information may also be obtained from U.S. Customs and Border Protection ports of entry. Please consult your telephone directory for an office near you. The listing will be found under U.S. Government, Department of Homeland Security.
“Your Comments are Important”

The Small Business and Regulatory Enforcement Ombudsman and 10 regional Fairness Boards were established to receive comments from small businesses about Federal agency enforcement activities and rate each agency’s responsiveness to small business. If you wish to comment on the enforcement actions of U.S. Customs and Border Protection, call 1-888-REG-FAIR (1-888-734-3247).

REPORT SMUGGLING 1-800-BE-ALERT OR 1-800-NO-DROGA

Visit our Internet web site: http://www.cbp.gov